The Voice of the Networks



Energy Networks Association

Open Networks Project Phase 3 2019 Project Initiation Document

April 2019

Energy Networks Association

Document Ref: ENA-ON-Phase 3 PID-2

Restriction: Final Published Version



Document Control

Authorities

Version	Issue Date	A uthorisation	Comments
1.2		Open Networks Project Steering Group	
2		Open Networks Project Steering Group	Updated following consultation.

Related Documents

Reference 1	Open Networks Project 2018 Review
Reference 2	Published Products on ENA website
Reference 3	Update on Least regrets
Reference 4	ENA Response to consultation on 2019 workplan

Change History

Version	Change Reference	Description
0	N/A	Various versions reviewed and updated from Workstream and Steering Group input

Distribution

To be published alongside consultation document for views from external stakeholders



Table of Contents

Docu	ment Control	1
	Authorities.1Related Documents.1Change History.1Distribution.1	
Table	e of Contents	2
1	Introduction	4
	1.1About ENA and our members41.2Purpose of this Project Initiation Document41.3Key changes based on consultation feedback41.4Background to Open Networks Project51.5Business Leaders' Commitment51.6Longer Term View5	
2	Project Scope, Workstreams & Dependencies	8
	2.1 In Scope	
3	Project Structure & Governance	15
	3.1 Project Governance. 15 3.2 Reporting. 17 3.3 Stakeholder Management. 18	
4	Delivery Approach & Planning	19
	4.1Introduction & Approach.194.2Product Internal and External Dependencies.194.3Project Closure.194.4Change Control.194.5Products Expected for Public Consultation.194.6Products Expected for Advisory Group Review.20	
5	Workstream 1A – Flexibility Services	21
	5.1Workstream Objectives.215.2Workstream Scope.215.3Workstream Products, Dependencies & Schedule.215.4Workstream Assumptions.25	
6	Workstream 1B – Whole Electricity System Planning & T-D Data Exchange	27
	6.1Workstream Objectives & Customer Benefits276.2Workstream Products, Dependencies & Schedule276.3Workstream Assumptions33	
7	Workstream 2 —Customer Information Provision & Connections	34
	7.1 Workstream Objectives & Customer Benefits 34 7.2 Workstream Products, Dependencies & Schedule 34 7.3 Workstream Assumptions 38	



8	Work	sstream 3 – DSO Transition	39
	8.1 8.2 8.3 8.4	Workstream Objectives39Workstream Products and Dependencies39Workstream Products, Dependencies & Schedule39Workstream Assumptions44	
9	Work	sstream 4 – Whole Energy Systems	45
	9.1 9.2 9.3 9.4 9.5 9.6	Introduction45Workstream Objectives & Customer Benefits45Workstream Products, Dependencies & Schedule45Workstream Resource Requirements46Workstream Governance46Workstream Assumptions46	
10	Work	sstream 5 – Communications and Stakeholder Management	48
	10.1 10.2 10.3	Workstream Objectives	
11	Moni	toring Implementation	50
12	Appe	endix A — Mapping of 2018 Products to 2019	51
13	Anne	ondix B — Key interactions between ONP Products and T.F.F.	- 53



1 Introduction

1.1 About ENA and our members

Energy Networks Association (ENA) represents the "wires and pipes" transmission network operators in the UK and distribution network operators for gas and electricity in the UK and Ireland. Our members control and maintain the critical national infrastructure that delivers these vital services into customers' homes and businesses.

1.2 Purpose of this Project Initiation Document

This Project Initiation Document (PID) outlines what the Open Networks Project will deliver in 2019, how it will be delivered and when. It is a best view at this point.

The areas of work outlined in this document have been identified on the basis of work done to date, new areas of market agnostic developments identified through the least regrets analysis of the Future Worlds and stakeholder feedback. In addition to scope, this document also outlines the governance processes for delivery.

An initial version of this PID was published for consultation in January 2019 and based on stakeholder feedback, the scope, priorities and timeline has been revised to reflect feedback. A summary of the consultation and actions that we are undertaking to progress the feedback can be found here. Key changes to this version of the PID are summarised in Section 1.3.

The Open Networks Project will evolve over time as we learn and we need to be adaptable in delivering our objectives to ensure that they remain fit for purpose. We expect that the products and development work will evolve during the year and the Steering Group will provide guidance on the direction of the project.

1.3 Key changes based on consultation feedback

Area	Key changes
Dependencies	Based on feedback from the consultation, we have now identified and outlined additional dependencies for the project in Section 2.3 of this document.
	We have outlined key interactions between ONP products and T.E.F in Appendix B.
Products & Timescales	We have revised the scope and timescales based on the feedback from the consultation as well as detailed scoping activity that we have undertaken in the last quarter to reflect further detail and planning.
	An additional product has now been added to WS3 to reflect stakeholder feedback on potential conflicts of interest and unintended consequences.
Consultations	The scope of the WS1A consultation has been widened to include other products from the Flexibility Services workstream to give stakeholders the opportunity to comment.



The WS2 Queue Management consultation has been
brought forward.

1.4 Background to Open Networks Project

In December 2016, Energy Networks Association (ENA) members gave their commitment to the Open Networks Project, a major collaboration that will transform the way that both local Distribution Networks and national Transmission Networks will operate and work for customers.

Launched in January 2017, ENA's Open Networks Project has started to lay the foundations of a smart energy grid in the UK.

The Open Networks Project has introduced real momentum into the development work required to enable the UK's energy networks to:

- Facilitate our customers' transition to a low carbon future, including the electrification of heat and transport.
- Address the challenges rising from the continued uptake of local generation.
- Evolve to be market enablers for a whole range of new smart energy technologies.
- Reduce costs to customers by contracting for flexibility services alongside investment in traditional and innovative network solutions.
- Play a key role in delivering overall lowest energy system costs for customers.

1.5 Business Leaders' Commitment

The Business Leaders of the Network Operators, Transmission Operators and Electricity System Operator (ESO) have reiterated their commitment to a long-term project to be led by ENA to progress the transition to DSO through enabling flexibility markets and delivering whole system outcomes to reduce cost for consumers.

We highlighted to the Business Leaders that we need to be adaptable in our approach to the project as we learn, as there will be a number of challenges and changes that we can't foresee now. Ofgem and BEIS have stressed the need for us to be adaptable in our project.

1.6 Longer Term View

The Open Networks project is a long-term piece of work to deliver network improvements and transition them into our existing market arrangements which ENA will set out in a long-term programme. Phase 2 of the project has been completed in 2018 and Phase 3 will run through 2019. Following that, ENA will continue to support a collaborative development project along the journey to transition to DSO.

We expect that the project development work will evolve over time and we will adapt, but a broad timeline for development is set out below. Different initiatives will take different times to complete and there is the potential for staggered roll-out of some processes across different geographic areas, as Open Networks can't deliver "one-size-fits all" solutions for many of the challenges which can be geographic.



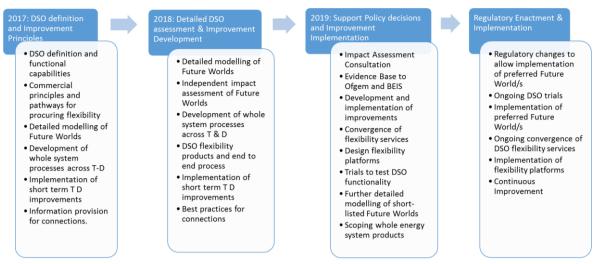


Figure 1 Open Networks Development Timeline

1.6.1 Overarching Programme Objectives

The objectives of the overall Open Networks Project remain to:

- Share information and work collaboratively across network operators, with Ofgem, BEIS and other stakeholders to progress the transition to DSO and improve outcomes for customers.
- Maintain a leading position for network operators in the development of Open Networks.
- Ensure that the customer is kept at the centre of any process development to ensure that their experience can be improved, we allow connecting customers to realise value from their technology and that our outputs deliver lower cost outcomes for all consumers and society.
- Bring consistency in approaches across networks through existing and new processes to support the transition to DSO, interactions with each other and interactions with customers.
- Enable data visibility and better access to non-confidential data across transmission and distribution and for customers.
- Ensure conflicts of interest are proactively identified and appropriate measures are put in place to address them appropriately.
- Take a whole electricity system approach to ensure that the value across the wider system is considered and widen this to consider a whole energy system approach.
- Inform the regulatory debate around funding (including ET2 & ED2).

These overall objectives underpin how we approach the development work in Open Networks and then we have further targeted objectives for each workstream.

1.6.2 BEIS/Ofgem Smart Systems and Flexibility Plan Update

In October, Ofgem & BEIS published an update on their Smart Systems and Flexibility Plan and recognised ENA's progress through the Open Networks Project in 2018 and reiterated the onus on the networks to continue opening network requirements to flexibility and removing barriers for connecting storage.



The table below outlines the next steps that have been documented in the update that relate of the Open Networks project and how the Open Networks will support them in 2019.

Action Ref	Next steps outlined in update	What Open Networks will do in 2019
1.6	"The ENA, through the Open Networks Project, will consult on specific changes to the queue management process by the end of 2018, with a view to changes being implemented by network operators soon after."	We will review the consultation responses to identify key stakeholder messages and will outline our next steps for implementation of good practice for queue management and interactivity in Workstream 2. We will be working closely with industry to close the gaps that were identified for development in the consultation.
3.5	"DNOs will now open up network requirements to markets and competition on a business-as-usual basis. In doing so, they should address the potential conflict of interests between them being a procurer of network services and a potential provider of network solutions. We expect DNOs to publish data, at regular intervals, on the volume of flexibility they have procured, to demonstrate progress in their transition to DSOs. The Government and Ofgem are prepared to take further action if the network and system operators DNOs do not take adequate measures to address conflicts of interest." "The ENA has engaged a consultant to conduct an impact assessment relating to its 'Future Worlds' options. This will consider the costs and benefits related to how the role of DNO/DSOs and other system actors may evolve beyond opening networks requirements to market competition. This work, and stakeholder views related to it, will be provided to Ofgem and the Government, as one element of input as part of their wider considerations for the need for wider system developments."	ONP will continue to proactively identify conflicts of interest for DNOs and other actors in the Future Worlds and any potential unintended consequences in Workstream 3. The 2018 Review will publish 2018 figures for flexibility and we will continue to publish these periodically. ONP will be leading a public consultation in Q1 2019 on the findings of Baringa's analysis of the Future Worlds to get stakeholder views. ONP will share the consultation findings and our work on key enablers as well as the further work defined in thein the DSO Transition workstream below.

We are working with industry to deliver change at a pace that achieves meaningful short-term improvements for customers and also agreement on how markets should operate in the longer term. For further details of how we have made developments on this in 2018, please refer to the 2018 Project Review.



2 Project Scope, Workstreams & Dependencies

2.1 In Scope

ENA is responsible for leading Phase 3 of the Open Networks Project in collaboration with 10 of UK and Ireland's network operators and owners, respected academics, NGOs, government departments and the energy regulator.

In developing the scope for 2019, we have considered a number of areas of work and feedback that we have received from stakeholders to date. We will continue to take an agile approach to ensure that what we deliver is fit for purpose, taking into account of emerging developments and stakeholder needs.



Trials that are identified under Phase 3 of this project will utilise NIC funded projects (including the recently agreed Transition, Electricity Flexibility and Forecasting System and Fusion projects) and NIA projects where feasible. These trials will be informed by Open Networks and provide substantive input to inform the work under this project.

We have allocated the scope of work across 6 workstreams that are defined in more detail in the associated sections of this PID and workstream scoping documents. These define the outcomes and products for each workstream.

We have 3 workstreams on shorter term improvements that can be developed and progressed whilst the transition to a Future World for DSO is in development. This has been split into 3 workstreams as there are 3 different topic areas to focus development work on and because the body of work would be too great for 1 workstream:

- Workstream 1A Hexibility Services will continue work to define and develop standardised
 approaches across DNOs in their procurement of flexibility services, as well as initiating new work
 to design changes to facilitate and encourage new markets and platforms for flexibility (e.g. peerto-peer trading).
- Workstream 1B Whole Electricity System Planning & T-D Data Exchange will take forward the work completed in 2018 on investment planning and forecasting to implement new



processes as BAU and to further develop coordinated planning approaches in investment, operational and real time timescales.

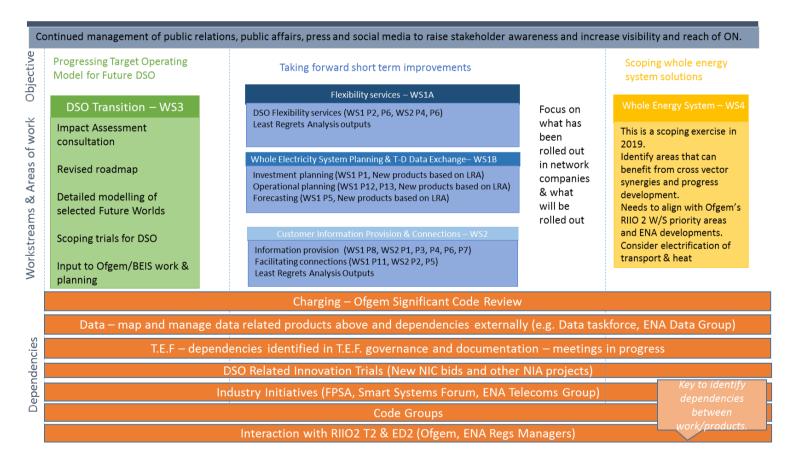
 Workstream 2 – Customer Information Provision & Connections will roll-out good practice developed in 2018, bringing a level of convergence across networks in the connections process, progress queue management developments and will further improve visibility of information for customers and between network operators.

We have focused **Workstream 3 – DSO Transition** to inform the transition to DSO and be targeted on activities required to transition to a Future World for DSO. WS3 will continue to support the assessment of the Future Worlds and the various pathways to the transition to DSO to continue to build an evidence base (through published deliverables outlined in PID – to be clear to stakeholders, we will not be collating and publishing a separate evidence pack) for any Ofgem and BEIS regulatory decision making.

We have initiated a new **Workstream 4 – Whole Energy System** to scope and progress cross vector thinking and developments.

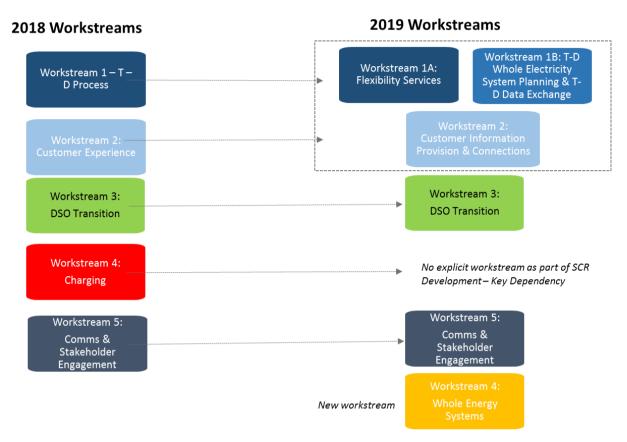
Workstream 5 – Communications and Stakeholder Engagement will continue to promote stakeholder engagement and communications for the Open Networks Project.

This is described diagrammatically below:





In order to reflect continuity in the areas of development, we have retained the workstream numbers from 2018. The diagram below shows how the 2018 workstreams map across 2019.



2.2 Out of Scope

We have identified that individual DNO or ESO initiatives may support this work and will inform this work, but may not fall within the scope of this project.

EV readiness is excluded from the scope of the Open Networks project, however as it is a key driver for Open Networks and closely links to flexibility (being enabled in this project), collaboration will continue with the Low Carbon Technologies Working Group that has been setup under ENFG to work on it.

Behind the meter activities are generally not included in the scope of network processes and therefore Open Networks, although facilitating markets for services that may be driven from behind the meter activity (e.g. domestic generation for aggregation) is in scope.

Whilst the harmonisation of Assessment & Design (A&D) Fees across networks is not included in the scope for ONP, ENA are progressing this through close engagement with stakeholders through the DER Connections Steering Group to consider issues that have been raised by industry. ONP will continue to engage with this work as required and will reflect any subsequent changes in the connections process where required.

2.3 External Dependencies and Interfaces

As the Open Networks project is starting to get into detailed process development, we recognise that there is an increased need for the project to interface with external working groups to ensure that the work between Open Networks and other industry initiatives is aligned.



These dependencies need to be managed at a project level to ensure the right level of engagement and then at a more detailed product level to ensure that we are clearly defining and understanding:

- Where outputs from the Open Networks are fed into relevant groups/projects to inform their work.
- Key outputs delivered in the industry are taken into consideration in the development work under Open Networks project.

The following table introduces some of the external dependencies that have been identified at the initiation stage of the project and based on feedback provided though the consultation, this includes additional initiatives highlighted by stakeholders. It is to be noted as part of the early development work for each product, the detailed linkages and interactions with external working groups will need to be identified and managed as required through the life of the products. The onus is on the product teams to manage the dependencies with input from the workstreams and the Steering Group.

Recognising the level of interaction that will be required with Charging, trials and RIIO T2, a dedicated SME will be allocated to ensure appropriate interfacing with ON products.

Category	Dependency Group	Description
Charging & Access	Ofgem Significant	This is a key initiative that is expected to be supported by the Regulation team in ENA and sit outside the Open Networks Project.
	Code Review	There are key interactions with all of the workstreams and particularly:
		charging functions and the price driven Future World
		key enablers
		connection arrangements
		It is proposed that Paul McGimpsey continues in a similar role to that which he has played to date in taking a leading role on charging and the key interface to Open Networks.
	Industry-Led Access Group	The Industry-Led Access Group is led by the ENA Regulation team on behalf of the electricity network operators. This working group is progressing work in the following product areas ¹ that were outlined in Ofgem's decision letter in Dec 2018 for the industry to lead:
		Non-form generation trading of curtailment obligations
		Capacity Trading and Exchange of Access Rights
		Active Network management Charging
		There are key interactions with the products that relate to curtailment and capacity trading and interaction will need to be closely managed to ensure that ONP deliverables are taking the developments from this group into account and appropriately feeding inputs as required. These dependencies will be identified at a product level to ensure alignment. In addition, this working group will be reporting to ONP Steering Group

¹ The Industry Led Access Rights Allocation Working Group Project Initiation Document can be found on Michael.Oxenham1@nationalgrideso.com



		as part of their decision-making and project delivery steer. This will ensure alignment on direction of travel.
		It is proposed that Paul McGimpsey continues in a similar role to that which he has played to date in taking a leading role on charging and the key interface to Open Networks.
Data	Energy Data Task Force	The Energy System Data Taskforce ² has been established by BEIS, Ofgem and Innovate UK to develop a set of recommendations on improving data availability and transparency to facilitate greater competition, innovation and markets that lead to a more efficient and cost effective energy system.
		The five core areas of focus for the taskforce are the following:
		Data Availability & Value
		Opportunities
		Architecture
		Governance
		Risks
		This taskforce is being run by Energy Systems Catapult and the current view is to deliver the work in 4 sprints with a view to deliver the final report in May 2019.
		There are a number of products that have been delivered under ONP to date and are being planned for 2019 that will need to feed into the work packages being delivered by this taskforce. In particular, WS2 P1 System Wide Resource Register has been identified as a key product for interaction to ensure that the principles identified under the Energy Data Task Force are being implemented in how information is being made available. This product now has BEIS representation from the Energy Data Task Force to provide direct input.
	ENA Data Group	The ENA Data Group is a sub-committee that sits under ENA's Research and Development (R&D) Managers Group that is the forum to collaboratively address data issues and share best practices.
		This group is looking at data governance including best practice for data collection and processing and is well placed to provide input to ONP on shorter term data improvements (in planning and operational timescales) and can help inform view on enabling data governance arrangements needed for DSO. As part of the detailed scoping under ONP, these dependencies need to be identified at a product level with agreed inputs/outputs and level of interaction.
T.E.F.	T.E.F. Project	The Transition (SSEN), Electricity Flexibility and Forecasting Systems (WPD) and Fusion (SPEN), also known as T.E.F, are the joint DSO NIC 2017 projects that have been approved by Ofgem. These projects are very closely linked to the work under ONP as they build upon the DSO

 $^{^2 \ \}text{TOR can be viewed here} \ \underline{\text{https://www.qov.uk/qovernment/groups/energy-data-taskforce}}$



		functions and Future Worlds work and are a vehicle to practically test various areas of DSO functionality such as platforms, forecasting systems and flexibility markets through Universal Smart Energy Framework (USEF). The T.E.F projects are a key dependency for the ONP and the interaction needs to be identified at a product level with agreed inputs/outputs and when these will be shared. Kyle Murchie is allocated as a dedicated contact for all trials activity to reflect the importance of this activity.
DSO Related Innovation Trials	New NIC and other NIA projects	Relevant new projects need to be Highlighted to Open Networks to consider dependencies. Kyle Murchie is allocated as a dedicated contact for all trials activity to reflect the importance of this activity.
Industry Initiatives	FPSA	The Future Power Systems Architecture (FPSA) project, led by IET and ESC, focusses on the overall industry framework and is complementary to the Open Networks Project. Continued engagement is needed to ensure that the projects are aligned and that the Open Networks project remains the clear focal point for network transformation. The FPSA project team will continue to input to the Open Networks project through the Advisory Group and through Energy Systems Catapult (ESC)'s membership on the WS4 Whole Energy Systems.
	Smart Systems Forum	BEIS/Ofgem Smart Systems Forum brings together representatives from the wider industry to help implement and steer the Smart Systems & Flexibility Plan and cover wider network issues related to the evolution of the electricity system. ONP will continue to provide updates and input through the ENA representatives on the group.
	ENA Strategic Telecoms Group	This working group is led by ENA as a forum for ENA members to review current understanding and approaches and to facilitate the development of ongoing and future telecommunications initiatives though internal and external expert involvement and collaboration. As part of any detailed modelling for Future Worlds, liaison with this group will be required to seek input on telecommunication system developments for the DSO transition.
	ESO Forward Plan	In order to facilitate whole electricity system outcomes, it is key to ensure that the work is aligned with the ESO Forward Plan and the roles and principles outlined within it to ensure alignment of processes and consistency across GB. This will be taken forward through ESO representation on products and workstreams. Detailed touch points with the various areas of work being led by the ESO such as their work of Product Roadmaps are identified in detail at a product level with input directly being managed by the ESO representatives allocated to those products.



RIIO 2	ENA ERG, Ofgem & BEIS	Ensure input is provided to relevant groups from Open Networks products to inform RIIO T2 and ED2.
		We have added the chair of the ENA Electricity Regulation Group, James Hope, to the Steering Group to act as liaison and manage dependencies for RIIO 2
Code Groups	SQSS, GC, DC, SEC, STC, DCUSA, CUSC and BSC	Taking a similar approach to 2018, a schedule of code interactions needs to be maintained to outline the interaction that is needed between the various code mods and the ONP products in 2019.
RIIO 2	Ofgem consultation on licence conditions	Ofgem published their consultation on licence conditions and guidance for network operators to support an efficient, coordinated and economical whole system in Dec 18 that proposed new licence conditions. These proposed licence conditions are a key dependency for ONP products developing coordinated processes across T and D to deliver whole electricity system outcomes.

2.4 Risks and Issues

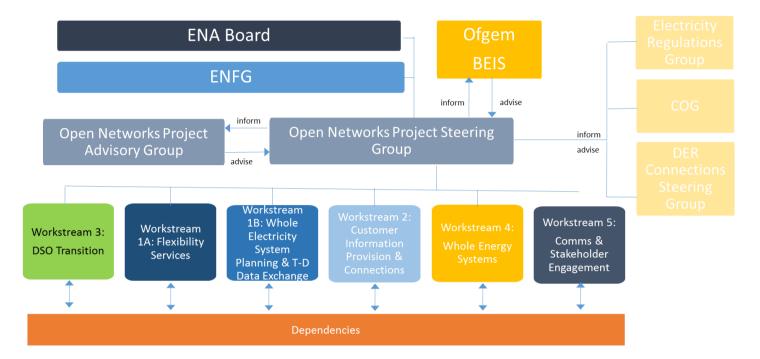
Risks and Issues are managed by the Open Networks Steering Group as part of the monthly reporting and review.



3 Project Structure & Governance

3.1 Project Governance

The project governance structure is as below:



3.1.1 ENA Board

The ENA Board is engaged with progress and any issues from the Open Networks Project. Paul Fidler will report to the ENA Board from ENFG.

3.1.2 ENFG

ENFG will be the group that holds the funding for the Open Networks project, but will delegate authority for the spend of that budget and the management and delivery of the project to the Open Networks Steering Group. Paul Fidler will report to ENFG from ON Steering Group on any of these items. The ENFG is convening monthly before the Steering Groups by teleconference to identify and address any more strategic issues that might apply to the project.

3.1.3 Open Networks Project Steering Group

The ON Project Steering Group is the key group with responsibility to direct the delivery of the ONP project to time, cost and quality. Any deviations to the approved PID will be managed by the Steering Group and escalated to the ENFG if there is further budget likely to be required or a significant impact on time or quality.

In addition, the ON Project Steering Group also has the responsibility of the approval and delivery of products and outcomes from the Industry-Led Access Group.

We expect that key products or deliverables will come to the Steering Group for approval and sign-off, but a high proportion of products will be delivered and approved within workstreams.

The ON Project Steering Group will be chaired by an ENA Member representative (Nigel Turvey from WPD at this point of the project) and supported by the Project team as secretariat.



The ON Project Steering Group will be a small group with a single representative (with alternate) from each operator organisation including Ofgem and BEIS, ENA representation from the Operations Director, Project Director and the Head of Press and Public Affairs to provide a link to the ENA Public Affairs Committee (PAC). We have added the Chair of ERG to the Steering Group this year to recognise the importance of the link to RIIO2.

The Steering Group meet monthly to formulate the programme and drive progress and this would allow the group to set the priorities and scope, whilst still maintaining transparency.

The ON Project Steering Group will assess:

- Priorities and scope through the PID and project plan with updates.
- Product/deliverable approval.
- Progress against plan.
- Escalated risks and issues.
- Costs against budget.
- Key decisions.
- Previous actions.

The ON steering group will represent the networks from a united programme perspective. Single operators may disagree with outputs or direction, but the programme will progress with the majority view. To ensure this, any communication of the outputs of the group will make it clear whether the view expressed is a unanimous or a majority view.

3.1.4 Open Networks Project Advisory Group

The Open Networks Project Advisory Group is a critical group for stakeholder input to the project developments. This meets every 2 months. This has worked well to date with representatives published on the ENA website here.

Input and feedback at Project Advisory Group meetings are recorded and all specific points are addressed. Input and feedback to date has been used to shape the Project work plan and outputs including this PID.

3.1.5 Ofgem & BEIS

The ON Project will work closely with Ofgem and BEIS and we expect that the project outputs will contribute to future Ofgem and Government considerations on future markets.

Ofgem and BEIS input to the Project Steering Group and to specific workstreams and product teams where this is of particular value. Ofgem and BEIS representatives also attend the Project Advisory Group.

3.1.6 DER Connections Steering Group

The ON project will closely liaise with the DER Connections Group and to provide regular updates and to take their input on key customer facing deliverables.

3.1.7 ERG (Electricity Regulation Group)

The ON project will closely liaise with the ERG to take their input on regulatory issues. In 2019, we have expanded the membership of the Steering Group to include a representative from ERG to ensure that regulatory perspective is provided at an appropriate level.



3.1.8 COG (Commercial Operations Group)

The ON project will closely liaise with the COG, provide regular updates and take their input on commercial issues.

3.1.9 Open Networks Project Team

The ON Project Director, Jason Brogden, reports to the ON Steering Group and is responsible for the day-to-day delivery of the project as set out in this PID. The Project Director will manage the resources on the project within the budget allocated to deliver the defined products to time, cost and quality.

The Project Director and the project team will have the autonomy to communicate directly with stakeholders, including Ofgem & BEIS, whilst making it clear whether any views expressed are a personal opinion or the view of the group (be it unanimous or majority).

Jason is supported by the ON Project Manager, Farina Farrier.

3.1.10 Workstream Working Groups & Resources

Working Groups will be formed to develop products in the different workstreams in the same way that they were for previous phases of the project. Allocated ENA member resources will develop products with review and guidance given from the workstream working groups and the Advisory Group, where relevant. In addition to ENA electricity member resources, WS4 Whole Energy Systems has been opened up to wider industry participants including gas, DER, generators and suppliers.³

There will be an ENA technical architect with responsibility for consistency and providing technical input across multiple products across workstreams. There are links between many products across workstreams and therefore these links and consistency is important (e.g. information provision).

We anticipate that each workstream working group will continue to be chaired by a Steering Group member wherever possible and supported by the Project team as secretariat. This will help guide development and provide a link to the Steering Group.

There are a number of products that flow over from 2018 development and the key themes covered in the Workstreams are also a continuation of previous work in many cases. We will seek to allocate the same resources as previously working on these areas from 2018 to 2019.

Product development will be opened up for input from stakeholders, for example WS1A P! (Flexibility Principles) has convened a stakeholder workshop for input.

We expect that the Project Director will direct the resources deployed from members to work on the products in the workstreams.

Recognising the level of interaction that will be required with charging, trials and RIIO T2, a dedicated SME will be allocated to ensure appropriate interfacing with ON products.

External consultancy resource will be deployed where necessary and there is a budget allocation made for potential consultancy resource/spend where it can be identified in advance.

3.2 Reporting

Progress Reports will be provided to the Steering Group at every meeting. The reports will include progress on products to time, cost, and associated risks and issues.

³ A complete list of WS4 members can be found <u>here</u>.



There will be written reports and decision papers to support any key decision points. All reports will be distributed and controlled by the project team.

3.3 Stakeholder Management

The project will continue to meet and discuss ON with key stakeholders through various forums including but not limited to the Advisory Group. The project will also engage with wider industry including MPs, regulatory, government departments, civil servants, press, gas networks, trade associations, think tanks, charities, generators, suppliers, technology suppliers, aggregators, community groups, local authorities, regional development agencies, manufacturers (e.g. cars, batteries), flexibility service providers, consumers.

The level of stakeholder engagement for 2019 is expected to increase from 2018 with further resource allocated to communications. We will maintain a focus on the following two aspects of engagement:

- Input to and review of our key products and deliverables through the Advisory Group
- Ensuring that the wider stakeholder community are engaged with ON Project developments and have opportunities to engage.

For Workstream products requiring wider review and input, our approach includes:

- Continued collaborative development with Advisory Group
- Wider consultation on key products including webinars
- A more structured plan for public consultation is included in Section 4.5 of this document.

In 2019, we will continue to focus on wider stakeholder community engagement. Activity will include:

- Public newsletter
- Speaking opportunities at external events
- Breakfast briefing events
- Panel events
- Webinars

A calendar of all consultations and planned stakeholder events will be maintained on the ENA Open Networks Website and details will be shared with stakeholders as they become available.



Figure 4 – Categorisation of Stakeholders to support Engagement Activities



4 Delivery Approach & Planning

4.1 Introduction & Approach

This PID will act as the scoping document for delivery of products in the project. A lesson learnt from 2018 is to try to avoid losing time at the beginning of the year by spending too much time scoping, particularly when some products are a continuation of 2018 deliverables. We have to be flexible in our approach.

The products and the activities needed to deliver those products will be captured in a product tracker along with their review cycles and meetings that we expect input from (e.g. Advisory Group or DER Connections Steering Group). We will then update and monitor achievement against that product tracker to report progress.

4.2 Product Internal and External Dependencies

Continued management of dependencies between products and workstreams will be required in 2019 and we intend to capture and monitor specific dependencies within the project where we can.

4.3 Project Closure

The criteria for project closure will need to be agreed and handover completed to the next phase of the project and/or into operations/Business As Usual.

4.4 Change Control

Once products have been approved, they will be baselined and will also be subject to change control. Should a change to a published product be requested, the impact of the change will be assessed, and a decision whether to proceed with the change will be made. The Project Management function will decide which body is the most appropriate to assess the impact of the change — and the body approving the change will depend on the result of this impact assessment. Where there is negligible impact, the body originally approving the item will usually approve the change; where there a more substantive impact the ON Steering Group will usually approve the change; and if there is any material cost or time impact the ENFG will approve the change.

We expect that there will be iterations of some of the project products (e.g. Terms and Definitions).

4.5 Products Expected for Public Consultation

Product	Description	Launch Timing			
Overall Pro	Overall Project				
Future Wo	rkplan & Prioritisation for 2019	Jan 19			
WS3 - DS0	WS3 – DSO Transition				
P1	Impact Assessment	Early Mar 19			
WS1A - Fl	exibility Services				
P1, P2 &	DSO Services – Market Principles, Procurement	Jun 19			
P4	Processes and Commercial Arrangements				
WS1B-W	hole Electricity System Planning & T-D Data				
Exchange					
	N/A				
WS2 – Cus	stomer Information Provision & Connections				
P2	Queue Management	Jul 19			



WS4 – Whole Energy Systems	
Dependent on scoping work	

Based on feedback from the consultation, we have made a decision to broaden the scope of the WS1A consultation in June to include other products from the workstream to give stakeholders the opportunity to provide input into all development work across the workstream. These products will include elements from products below as these have been identified as high priority products that stakeholders would like to see further engagement on:

WS1A P2 DSO Procurement Processes

WS1A P4 Commercial Arrangements

WS1A P6 Facilitation of new markets

We are conscious of not overloading stakeholders with too many consultations from Open Networks amongst many other industry initiatives. For other products that have been identified as high priority, we give stakeholders the opportunity to provide input through other proposed engagement channels such as development workshops, webinars and surveys. We will be maintain an <u>events calendar</u> on our website to give stakeholders visibility of these events.

4.6 Products Expected for Advisory Group Review

Taking a similar approach to 2018, we will share products through their development cycle with the Advisory Group to ensure that their feedback can help steer and inform the outputs. We will endeavour to share agendas and supporting material two weeks in advance to provide stakeholders visibility of the products and material that will be reviewed.



5 Workstream **1A** – Flexibility Services

5.1 Workstream Objectives

There are 3 key objectives of the Flexibility Services Workstream:

- 1. Develop and deliver good practice and convergence of directly contracted DSO services to customers across DNOs to deliver a consistent experience for customers
- 2. Facilitate markets outside the direct procurement of service by DSOs to allow third parties to develop effective and liquid market platforms for customers to realise value for flexibility
- 3. Support the wider use of DSO services by removing barriers and encouraging the consideration of flexibility solutions

5.2 Workstream Scope

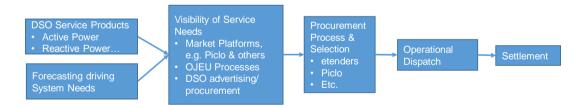
For the delivery of good practice and convergence of DSO service procurement, we will build on the work done on DER services in 2018 under Workstream 1 with:

- Additional Services further to active power
- Consistent processes for DSO service procurement
- Good practice or standards for commercial terms in DSO service contracts (e.g. contract length, exclusivity)
- Good practice for whole system optimisation between network operators

For the delivery of markets outside direct DSO procurement, we need to consider:

- What the markets might be analyse and identify the market opportunities
- How we might facilitate those markets what data we might need to provide to the market;
 what visibility; what data we might require back from market platforms so that we can ensure customers realise value

Need to ensure that Flexibility Workstream Delivers on Facilitating, Standardising & Simplifying through this process



5.3 Workstream Products, Dependencies & Schedule

R e f	Product	Timeline / Resources	Consult	SG Revie w	AG Revie W
1	Flexibility Market Principles	Jan 19 — Jun 19	Public Consultation	Review as require d	Review as require to



	Outline guiding principles for flexibility marketplace for DSO services that ensure competition and mitigate against any conflicts of interest or unintended consequences to make sure consumers benefit from a fair and more efficient system. This product will: a) Develop guiding principles to drive the right behaviour for the DNOs, potential platform providers and market participants involved in the procurement of flexibility to				suppor t develo pment
	b) Build on work done to date under ONP such as Commercial Principles for Market Facilitation, principles of neutral market facilitation and will consider work done by other industry projects such as Universal Smart Energy Framework (USEF). This product links closely with WS3 as it will take input from WS3's work on unintended consequences and conflicts of interest as well as consultation feedback from the Future Worlds' consultations and will feed into further WS3 developments to inform the DSO transition. This output will be delivered as an 8 week consultation towards the end of June, followed by a summary of the consultation and actions in early Q4 2019. Stakeholders have indicated through responses to the Future Worlds consultation that this is an area of high priority to them and as a result we have scoped this as a product and will be consulting on this.				
2	DSO Services – Procurement Processes Develop consistent processes to support the procurement of the DSO services taking into account the flexibility market principles from Product 1 and the output from the 2018 development work under Workstream 1. This includes: a) Undertake review of procurement activities (as identified in 2018 w ork) to date undertaken by DNOs and identify good practice and any gaps that need to be addressed. Additional areas to address w ould include: • Testing/prequalification requirements • Process for decision making for asset vs market flexibility • Consistent approach to flexibility reporting (look forwards, performance reports etc.)	Jan 19 - Sep 19 a)Jan 19 - Aug 19 b)Jan 19 - Aug 19 c)Jan 19 - Sep 19	Include elements in June Public Consultation	Review as require d.	As require to suppor t develo pment



		The deliverable will be a report summarising the findings, next level of detail for in-scope process steps.				
	b)	Identify data that needs to be made available to DER to support the procurement of DSO services. The deliverable will be a list of data items to support procurement of services for use by DNOs for more consistency in data provision.				
	c)	Identify ways in which this data can consistently be made available for potential platform providers to facilitate procurement. Identify outputs that DNOs would require from potential platform providers to meet their needs. The deliverable will be a report setting out ways in which data can consistently and transparently be exchanged between potential platform providers and DNOs to facilitate procurement.				
	work plants the sub-	on feedback from the consultation on our an, we will be including available elements deliverables identified above in the WS1A ation scheduled for June.				
3	DSO Se Proces	ervices – Dispatch and Settlement	Jul 19 – Oct	N/A	Review	As
	Review current activation, dispatch and settlement processes and develop good practice for activation and dispatch and identify what DNO capabilities are required to support this. This good practice should include alignment of DSO and NG ESO services in terms of procurement, timescales, service windows and contract terms as much as possible.		19		as .	require
	Review process and disprequired include terms o	current activation, dispatch and settlement es and develop good practice for activation patch and identify what DNO capabilities are if to support this. This good practice should alignment of DSO and NG ESO services in f procurement, timescales, service windows	19		as require d.	require to suppor t develo pment
4	Review process and disp required include terms of and con	current activation, dispatch and settlement es and develop good practice for activation patch and identify what DNO capabilities are if to support this. This good practice should alignment of DSO and NG ESO services in f procurement, timescales, service windows	Jan 19 – Dec	Include	require d.	to suppor t develo pment
4	Review process and disp required include terms of and con	current activation, dispatch and settlement es and develop good practice for activation patch and identify what DNO capabilities are if to support this. This good practice should alignment of DSO and NG ESO services in for procurement, timescales, service windows stract terms as much as possible.		Include elements in June Public Consultation	require d.	to suppor t develo pment



	c)	Develop good practice for alignment across DSO and NGESO services in terms of procurement timescales, service windows and contract terms (to include the applicability of 'exclusivity' terms and scope to participate in multiple markets). The deliverable will be a report and good practice guide on DSO/ESO flexibility procurement arrangements.				
	d)	Consider mechanisms for a consistent and effective review /validation of service provision and feedback loop for service providers – e.g. consequences of defaulting under contract. Identify rights and obligations for driving contract performance that can consistently be used across DNOs. The deliverable will be an updated version of the report from c) with a specific appendix on review /validation/audit process for service provision.				
	consider under W	velopment work will not include the ration of access rights which will be covered vorkstream 2 and the development work Open Networks on charging.				
	work pla the sub- consulta	n feedback from the consultation on our an, we will be including available elements deliverables identified above in the WS1A tion scheduled for June.				
5	optimis Take lea	ervices – Conflict Management & Cosation arnings available from all relevant Open is products and wider industry publications into the following: Develop a good practice for conflict resolution (ESO-DNO or DNO-DNO or DNO-other e.g. industrial facility, Suppliers) for these DSO services. This will take into account recommendations from RDPs, data exchange formats identified under 2018 WS1 P12 and trials of data exchange under 2019 WS1B P4. The deliverable will be a report that summaries good practice for conflict resolution across the whole electricity system.	Jan 19 – Dec 19	N/A	Review as require d.	As require to suppor t develo pment
	b)	Develop good practice for co-optimisation of services between ESO and DSO. This will consider outputs from the ENA Shared Service Group, previous innovation trials				



	such as Power Potential, SYNC and CLASS and European worksuch as TERRE and MARI. The deliverable will be a report that summaries good practice for service co-optimisation between system operators. These products will describe conflicts in service and not conflicts of interest in providing services and will provide clarity on the hierarchy for meeting whole system needs with flexibility and will deliver deterministic processes to ensure the system remains operable and costs are reduced through co-optimisation of services by multiple system operators.				
6	In addition to directly procured DSO services, we need to consider how we can facilitate other markets that the DSO might be able to enable or support in the future (e.g. peer-to-peer trading platforms, capacity management, trading flexibility to take on or avoid constraints). Development work should include consideration of: • Principles identified through P1 and proposals established through the Industry-Led Access Working Group's w ork on exchange of access • What data needs to be provided to facilitate new markets, • What data needs to be sent to network operators after any action/trade is made • Trial scenarios that can help to develop and understand these markets and the required DSO actions to facilitate these The deliverable will be a report outlining a best view on the types of non-DSO procured services and recommendations on actions required by the DSO and market participants for the facilitation of these markets.	Jul 19 – Dec 19	N/A	Review as require d.	As require to suppor t develo pment

Green text represents items identified through Least Regrets Analysis.

Blue text represents products rolled over from 2018.

5.4 Workstream Assumptions

The key assumptions for Workstream 1A are noted below:

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined and consultancy support may be engaged to support Product
- For products on the development and convergence of directly contracted DSO services, we have continuity in resource from WS1 Product 2 development in 2018.

Open Networks Project Phase 2 2018 Project Initiation Document v2



- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.



Workstream 1B – Whole Electricity System Planning & T-D Data Exchange

6.1 Workstream Objectives & Customer Benefits

The objective of this workstream is to:

 Take a whole electricity system approach to optimise existing processes across the Transmission and Distribution boundary by identifying synergies and developing more efficient processes for key network operator activities such as investment planning, operational planning and forecasting.

6.2 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline / Resources	Consu lt	SG Review	AG Revie W
1	Continue further development of the Regional NOA methodology developed in 2018 to incorporate additional options to include in the assessment of investment solutions. a) Continue to evolve Regional NOA process to: • Agree and develop a consistent approach to costing transmission and distribution solutions. • Continue to evolve the CBA process to adequately cater for distribution based solutions; build, non-build and market based. • Market test the outputs from the High Volts case studies (RFI to all market participants) • Develop new case studies for different system needs to further evolve the Regional NOA The deliverable will be an Engineering Technical Report to cover the above. b) Further development/assessment of funding options for Regional NOA for D solutions in collaboration with ERG for RIIO 1 and for the transition period betw een T2 and ED2 (2021 – 2023) and RIIO 2. • RIIO 1 proposals to be agreed by Ofgem (Jan – Mar 19)	a) Jan 19 - Dec 19 b) Jan 19 - Oct 19 c) Aug 19 onwards d) Apr 19	N/A	Review as required.	As require to support develop ment



	Development of RIIO 2				
	and transition period				
	options (Jan - Jul 19)				
	The deliverable will be a set of				
	proposals in the form of a written				
	methodology (slides or report forma	it)			
	c) Identify and submit code change				
	-				
	proposals as required. The deliverable will be licence change				
	_				
	requirements (if required) and a summary of code impacts to drive				
	prospective code modifications				
	d) Incorporate regional voltage				
	methodology into NOA 19/20				
	methodology and continue to evol	ve			
	processes for Regional NOA for				
	other system needs. (by Apr 19)				
	The deliverable will be the input in	to			
	the NOA 19/20 methodology that				
	w ill be published for consultation.				
	Further description				
	can be considered alongside Transmission I Transmission network. This product is a co Regional Networks Options Assessment (NO development of funding options in agreeme	ontinuation of this work for OA) process to include mar	further dev	elopment of	f the
2	Transmission network. This product is a conceptional Networks Options Assessment (NC	ontinuation of this work for OA) process to include mar	further dev	velopment of olutions and Review	f the I continue
2	Transmission network. This product is a conception of Regional Networks Options Assessment (Not development of funding options in agreement)	portinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19	further dev ket based s	velopment of olutions and	As require to support
2	Transmission network. This product is a conception of Regional Networks Options Assessment (Not development of funding options in agreement whole Electricity System FES Complete detailed process development for	positinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 –	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a confidence Regional Networks Options Assessment (Not development of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES.	positinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19	further dev ket based s	relopment of olutions and Review as	As require to support
2	Transmission network. This product is a concept Regional Networks Options Assessment (Not development of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES. a) Identify and implement tactical	positionation of this work for DA) process to include markent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES.	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a confectional Networks Options Assessment (Not development of funding options in agreement of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES. • Agree 2019 coordination	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES. • Agree 2019 coordination (Jan – Feb)	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 –	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Not development of funding options in agreement of funding options in agreement of funding options in agreement of the second options of funding the second options of the second options options of the second options of the second options options options of the second options o	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement whole Electricity System FES Complete detailed process development for coordinating National and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES. • Agree 2019 coordination (Jan – Feb)	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 –	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Not development of funding options in agreement of funding options in agreement of funding options in agreement of the second options of funding the second options of the second options options of the second options of the second options options options of the second options o	a) Jan 19 – Dec 19 a) Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement of funding options in agreement of the second options in agreement of the second options of the second options of funding options in agreement of the second options of funding options in agreement of the second options of funding options in agreement of the second options of funding options in agreement of the second options options of funding options options of funding options in agreement of the second options options of funding options in agreement options of funding options in agreement options of funding options in agreement options options in agreement options of funding options in agreement options in agreement options of funding options in agreement options options in agreement options options in agreement options options in agreement options opti	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement of funding options in agreement of the second options in agreement of the second options options of the second options options options of the second options option	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement development of funding options in agreement with the second development of funding options in agreement development of funding options in agreement development for coordinating National and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES. • Agree 2019 coordination (Jan – Feb) • DNO ESO TO liaison to produce 2019 FES b) Finalise templates and processes for information exchange to suppo	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Not development of funding options in agreement of funding options in agreement of funding options in agreement of the second options in agreement of the second options of funding options in agreement of the second options of funding options in agreement of the second options of funding options in agreement of the second options of funding options in agreement of the second options of the second options options of the second options	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 - Dec 19 a) Jan 19 - Jun 19 b) Apr 19 - Oct 19 c) Apr 19 - Sep 19 d) Oct 19 - Q2 2020 e) Jan 19 - Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Not development of funding options in agreement of funding options in agreement of funding options in agreement of the coordinate of the coordinate options and Regional FES. a) Identify and implement tactical improvements to DNO ESO TO liaison to feed into 2019 FES. • Agree 2019 coordination (Jan – Feb) • DNO ESO TO liaison to produce 2019 FES b) Finalise templates and processes for information exchange to support 2020 delivery of Whole Electricity System FES. The deliverable will	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 - Dec 19 a) Jan 19 - Jun 19 b) Apr 19 - Oct 19 c) Apr 19 - Sep 19 d) Oct 19 - Q2 2020 e) Jan 19 - Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conception of Regional Networks Options Assessment (NC development of funding options in agreement of funding options in agreement of the Regional options of the Regional Re	antinuation of this work for DA) process to include mare that with ERG and Ofgem. Jan 19 - Dec 19 a) Jan 19 - Jun 19 b) Apr 19 - Oct 19 c) Apr 19 - Sep 19 d) Oct 19 - Q2 2020 e) Jan 19 - Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Note development of funding options in agreement of the coordination options in agreement options in agreement of the coordination options of funding the coordination options of the coordination options options of the coordination options optio	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Note development of funding options in agreement of the coordination options in agreement options in agreement options of funding options in agreement of funding options in agreement options of funding options in agreement options of funding options in agreement options in agre	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Note development of funding options in agreement of the coordination options in agreement options in agreement options of funding options in agreement options of funding options in agreement of the coordination options options of the coordination options optio	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (NC development of funding options in agreement of the development of	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop
2	Transmission network. This product is a conceptional Networks Options Assessment (Note development of funding options in agreement of the coordination options in agreement options in agreement options of funding options in agreement options of funding options in agreement of the coordination options options of the coordination options optio	antinuation of this work for DA) process to include marent with ERG and Ofgem. Jan 19 – Dec 19 a) Jan 19 – Jun 19 b) Apr 19 – Oct 19 c) Apr 19 – Sep 19 d) Oct 19 – Q2 2020 e) Jan 19 – Dec 19	further dev ket based s	relopment of olutions and Review as	As require to support develop



	d) e)	opportunity/concern and proposals for any licence and code changes to support data exchange. Support delivery of whole electricity system FES Support Whole Energy System workstream by providing input on potential whole energy system interactions for 2020 and beyond.				
	Furthe	r description	<u> </u>	l	l	l
	develope approac	und: This product is a continuation of 2 ed a 'hybrid approach' to Future Energy h between the ESO and the DNOs thro to take forward the 'hybrid FES' approa	/ Scenarios (FES) to en- ugh common building b	able a more plocks. The	coordinated	d
	Real tir	ne data exchange & Forecasting	Jan 19 - Dec 19	N/A	Review	As require
3	a)	Map simple and complex networks to World A (DSO Coordinates), World B (Coordinated DSO-ESO procurement and dispatch) and World D (ESO Coordinates) and define responsibilities for DSO/TSO, methodology of Conflict of Service management and dispatch. Responsibility Assignment (RACI) Matrix to be used for mapping key high level interactions for each world. Define 'w hat' & 'how' data/information needs to be exchanged betw een DSO and ESO for World A, B and D (March 2019). Capture learnings from UK Pow er Netw orks and WPD RDP trials by mapping the results into RACI matrix and identify gaps (October 2019).	a) Feb 19 – Mar 19 b) Mar 19 – Oct 19 c) Mar 19 – Dec 19 d) Feb 19 – Apr 19 e) Apr 19 – Jun 19 f) Jun 19 – Jul 19 g) Jan 19 – Dec 19		as required.	require to support develop ment
	с)	Support roll-out of architecture of control/comms systems between T and D to achieve whole system coordination that allows managing conflicts of services, N-3 (operational tripping scheme) and Connect & Manage. This will be achieved by identifying the relevant architecture of control/comms (key requirements of process/systems between T-D to allow whole systems) systems				



	farrando Mardal (' a. A. D. arral D)	
	for each World (i.e. A, B and D) and associated scenarios.	
d)	Map what forecasting 'data exchange' we have on DSO/ESO side. For each world, map what 'data exchange' is required to execute operational forecasting for short (up to 48hours ahead) and medium (up to 3 weeks ahead) terms.	
e)	For each World (i.e. A, B and D); Investigate and address issue of service conflict betw een local and national actions. (Based on findings from 2018 WS1 P4.3). What data exchange is required to identify a conflict of services exist for emergency services reported in P4.3.	
f)	Revisit key learnings from other GB/international work (including latest findings from Power Potential, Project TERRE, CLASS and any others) on enhanced T D operational interfaces and identify learning that can be applied across GB. Update the P13 key learning report.	
g)	Processes for the European wide TERRE reserve product and for wider access to the GB Balancing Market (BM) are being implemented through 2019. (Prequalification will begin from end-February 2019 and TERRE go-live is planned for December 2019). The Product 3 team will be the primary Open Networks interface on the data exchange requirements for Project TERRE / Wider BM Access implementation. Specifically, the Product 3 team will periodically review the T-D work on TERRE / Wider BM access to ensure that the real-time processes and T-D data exchange to manage effective DER participation are in line with the conclusions for Product 3. The team will also review and feedback on any specific T-D operational	



		data exchange proposals for TERRE / Wider BM access.				
	into WS	lings from this product will be fed 3 P6 Further Modelling as input to system needs required for Future				
		r description				
	(Operation of the Rend to educedous)	und: This product is a continuation of vition Data and Control Architectures) that DPs in WPD and UKPN's network area and trials are scheduled for completion operational data exchange standards at these RDPs and will propose an approximate the propose and approximate the propose and th	t could not be complete to trial a NETSO led an for summer 2019 and t and control architecture	ed due to a d DSO led n he aim of tl s on the ba	delay in the nodel approa his product i	e timeline aches. The is to this
	Data e	xchange in planning timescales	Jan 19 - Dec 19	N/A	Review	As
4	a) i.	T–D Data Exchange Scope Identify changes to the scope of data exchange for whole system network capacity assessment reflecting the outputs of earlier ONP products. Create a template for data exchange	a) Feb 19 - Sep 19 b) Feb 19 - Oct 19 c) Mar 19 - Nov 19		as required.	require to support develop ment
	ii.	Update the data exchange template taking account of 2019 products impacting T-D data exchange.				
	iii.	Consider if additional data exchange is needed in all areas / GSPs or only where there are higher levels of DER.				
	•	Deliverables will include: Initial template detailing proposed data exchange requirements (May 19).				
	•	An extended template (Aug 19). Draft guidelines to implement revised data exchange requirements (Aug 19).				
	•	Report summarising the work carried out for sub-deliverable a) (Sep 19).				
	b)	T-D and DER Data Exchange Mechanisms				
	i.	Review the mechanisms used to share planning data and consider the wider use of on-line data transfer.				
	ii.	Consider the analysis software used by network companies and how the				



	transfer of natural models, between					
	transfer of network models between					
	companies is likely to change.					
l	Canaidar and recommend					
iii.	Consider and recommend					
	improvements to the mechanisms					
	used to share data between					
	network companies and from					
	customers to network companies.					
	This should include the use of the					
	Common Information Model (CIM)					
	or similar.					
	Dalla addisa alika da					
	Deliverables will include: Slides covering mechanisms for					
	planning data transfer (Apr 19).					
	Slides covering the analysis					
	software and models currently used,					
	and how the transfer of network					
	models is likely to change (Jun 19).					
	A report that scopes out option(s)					
	for changes to the mechanisms for					
	transferring planning data and					
	models and proposes next steps.					
	Quick wins would be identified. (Oct					
	19).					
	,					
(C)	T-D Data Exchange Code Changes					
i.	Identify a plan for how potential					
	code changes will be considered					
	and progressed through 2019.					
ii.	Taking account of sub-deliverables					
"	a) and b), and ongoing network					
	code changes addressing data					
	exchange (e.g. GC0106, CMP 298),					
	determine what further code change					
	is needed. Draft a code change					
	proposal and liaise with code					
	administrators.					
	Deliverables will include:					
•	Pow erpoint outlining approach to					
	code change through 2019 (Apr 19)					
•	A report with proposals for code					
	modifications to support subsequent					
	code working group(s) (Nov 19).					
	dings from this product will be fed					
	S3 P6 Further Modelling as input to system needs required for Future					
Worlds						
	er description				1	
	Background: This product is a continuation of 2018 WS1 Product 12 (TSO/DSO & DER Data Requirements) to take a wider approach to look at how data exchange in planning timescales can be					
made more efficient considering new data exchange requirements that may come out of ONP's work on						



Whole System FES, System Wide Resource Register, the revised Transmission Impact Assessment process and through ongoing grid code changes including GC0106.

Blue text represents products rolled over from 2018.

6.3 Workstream Assumptions

The key assumptions for Workstream 1B are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.

Timelines

 The timeline for P3 Real Time Data Exchange and Forecasting is dependent on the delivery timescales of the RDPs and the current timescales are based on the RDPS being completed in summer 2019.



7 Workstream 2 —Customer Information Provision & Connections

7.1 Workstream Objectives & Customer Benefits

For information provision, we need to ensure that we are delivering

- Benefits to customers of enhanced information provision to aid them through the connections and contracting processes and facilitate the realisation of value for their connected technology
- Information to potential 3rd party market facilitators/makers to allow the realisation of value outside direct DSO contracted services (as highlighted in the Flexibility Workstream
- Information sharing between transmission and distribution networks to benefit customers through the most cost-effective planning and operation of networks.

7.2 Workstream Products, Dependencies & Schedule

	Werned and Produces, Departmental of a confeder							
Re	Product		Timeli	-	Cons	SG	AG	
f			Resources		ult	Review	Revie	
							w	
1		1 Wide Resource Register – Detailed			N/A	Review	As	
	Design and Early Implementation		Jan 19 - Dec 19			as	require	
	Build on 2018 work to further develop options for a phased implementation of a system wide resource register for sharing data on DER and		a)	Apr 19		required.	to support	
							develop ment	
	reinforce	ement queues.	b)	Apr 19 – Jun 19				
	Referen	ce existing sources of information		Juli 19				
		-	c)	Feb 19 –				
	a)	Setup central webpage for stakeholders		Jun 19				
		to reference existing sources of data across GB networks.	d)	Jan 19 –				
		across of fictworks.	u)	Jun 19				
	b)	Monitor use of central webpage to	,					
		assess usage and interest. The	e)	Apr 19 – Jun 19				
		deliverable will be a report on the use		Juli 15				
		of the webpage including user feedback and Google Analytics data to help build	f)	Jun 19 -				
		the business case.		Jul 19				
	Assessment of confidentiality issues		g) Jul 19 –					
	c)	c) Propose code changes to address		Dec 19				
	0)	confidentiality issues identified in 2018.	h)	Jul 19 –				
		The deliverable will be slides or report	,	Dec 19				
		setting out approach for licence/code		1.140				
		changes for different options.	i)	Jul 19 – Dec 19				
	Option development and analysis			200 17				
	d)	Analyse data requirements identified in						
		2018 to better understand the cost benefit case and agree on data						
		requirements to take forward. The						
		deliverable will be updated templates to						
		lay out scope of data registers.						



	e)	Develop options for GB wide resource register (e.g. extend embedded TEC Register). These options should factor in outputs from other 2018 ON products and other data sources. The deliverable will be a set of viable options with details of costs, timescales and likely code impacts.						
	f)	Present detailed business case with options to Steering Group on how to progress registers. The Steering Group will make a decision on the next stage for a GB wide resource register. The deliverable will be a paper outlining these options.						
	g)	Establish network company processes for DER register. The deliverable will be a paper outlining processes.						
	h)	Finalise and implement system improvements for DER register.						
	i)	Agree code changes for wider DER register. (Jul 19 – Dec 19)						
	Furthe	r description						
	This product builds on the work completed in 2018 under 2018 WS1 P8 that reviewed the feasibility of having a central system wide resource register in place that provides information on DER resources and provides visibility to customers of the reinforcement queue. The aim of this product is to implement short term improvements that were identified in 2018 and to undertake detailed development of options for the design and implementation of this central register. This product will also continue assessment of confidentiality issues that have been identified and will propose code changes to address them. We should consider output from other workstreams and particularly any Workstream 1A and 1B data findings.							
	Queue	Management	Jan 19	– Dec 19	Public	Review	As	
2	a)	2018 WS1 P11 based on CFF consultation and the 2018 consultation responses on queue management (2018 WS2 P5). Develop detailed	a) b)	Mar 19	Consult ation	as required.	require to support develop ment	
		report covering these scenarios for flexibility queue management. These scenarios will underpin the development of proposed approaches for queue management and	c)	Apr 19 – Jun 19				
		interactivity. (roll over from 2018). The deliverable will be a report and slides.	d)	Jul 19 – Nov 19				
	b)	Develop improved queue management approaches across Transmission and also across Distribution, including:	e)	Apr 19 – Dec 19				



	c) d)	 Agreed principles of queue management Suitable milestones Alignment with any work on access and queue management under Ofgem's CFF SCR. Investigate opportunities for alignment of approaches across T and D The deliverable will be a report setting out recommended position that will be published alongside the consultation in July. Review proposed queue management approaches with Ofgem and BEIS to agree on a minded to position on an approach consult on industry with. Undertake public consultation on the minded to approach in July to get wider industry views. Review consultation responses, publish findings and update the approach. The deliverable will be a consultation followed by a summary of responses and actions based the consultation. Identify and agree any potential code changes at transmission and distribution to support the preferred approach and develop action plan to support roll out. Support may include workshops with network connections teams and impacted stakeholders. The 					
		deliverable be an action plan for rollout.					
	Further	description				<u> </u>	
	This pro address improvei policy ad	duct takes forward the work done under C action 1.6 from the Smart Systems and Fl ments to the connection queue through th cross networks. This product will need to t Significant Code Review and any network	exibility Pl ne develop ake into a	an. This proment of a concept of a concept of a concept of a concept any	oduct will o consistent work that	outline longe queue mana is progresse	r term gement
3	Interac			– Dec 19	N/A	Review as	As require
	a)	Review consultation responses from 2018 WS2 P5 and publish a response. Based on responses, develop proposals for a common interactivity process. The deliverable will be a good practice guide for interactivity.	a) b)	Jan 19 – Aug 19 Feb 19 – May 19		required.	to support develop ment
		additional processes to facilitate vity across networks, including:	c)	May 19 - Sep 19			
	b)	D – D interactivity – Review existing application / interface process between					



	distribution networks. This is a discovery exercise to inform c) below. It will investigate the extent of existing	d)	Jul 19 – Oct 19		
	D-D issues and will also look at forms of connection agreement between DNOs (e.g. BCAs or alternative arrangements). It will also consider IDNO-DNO issues. The deliverable will	e)	Oct 19 – Dec 19		
	be a report on current practices and impact on D-D interactivity with recommendations for consistent practice.	f)	May 19 - Dec 19		
c)	D – D interactivity – Develop processes for interactivity, to include assessment of clock start dates, queue position, data sharing and IDNOs. The deliverable will be a report on current practices and impact on D-D interactivity with recommendations for existing practice.				
d)	T – D interactivity – Develop new interactivity processes to include existing arrangements such as Appendix G, SOW, BEGAs, BELLAs etc. that take into account the clock start date and queue position. Develop common processes for T led constraints to see how D applications that impact T network are assessed. The process should include assessment of clock start dates, queue position and data sharing. The deliverable will be a report with an agreed process consistent with the Transmission Impact Assessment process.				
e)	T – D interactivity - Develop common processes for D led constraints to see how T applications that impact D network are assessed. The process should include assessment of clock start dates, queue position and data sharing. The deliverable will be a report with an agreed process consistent with the Transmission Impact Assessment process.				
f)	Identify any potential code changes on transmission and distribution and develop action plan to support roll out of new processes. Support may include workshops with network connections teams. The deliverable will be an implementation plan and workshops to disseminate new process.				
Further	description				
OND	0010 under WC2 DE and WC1 D10 9 D11 to			 	

ONP in 2018 under WS2 P5 and WS1 P10 & P11 to address action 1.6 from the Smart Systems and Flexibility Plan. This product focuses on the development of interactivity processes based on gaps that



	were outlined in the 2018 WS2 P5 consultation to ensure a quicker and more efficient connections process, ensuring fairness by treating customers in the application date order.					
4	Connections Agreement Review	Jun 19 – Jul 19	N/A	Review	As	
				as	require	
	We will conduct a short review of what is			required	to	
	included in connection agreements (e.g.			and	support	
	Flexibility Service schedule) in light of			approve	develop	
	developments in Workstream 1A and look at			if more	ment	
	whether there is value in developing further			work to		
	consistency across network companies in			be		
	connection agreements. This review will also			initiated.		
	take into consideration the National Terms of					
	Connection (NTC) and common terms and					
	schedules. A decision on whether to progress					
	this would be made in mid-2019 when other					
	related work is more progressed.					

Blue text represents products rolled over from 2018.

Terms & Definitions product: During 2019 we will continue to review the Terms and Definitions product and update and maintain this where we can see enhancements of new areas of clarity are raised by customers.

7.3 Workstream Assumptions

The key assumptions for Workstream 2 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups. This has been completed for Product 1.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.
- Subject Matter Experts from the wider industry may be engaged as per Terms of Reference to support product development.

Key dependencies

- Monitor and review flexibility tenders in the market and WPD's trial on extending the use of their
 "Flexible Power" product to allow flexibility options to be assessed as part of the new connections
 process. The aim of this monitoring exercise would be to determine the feasibility of combining
 flexibility and connections agreements, as identified above.
- The work on access delivered under Ofgem's Significant Code Review (SCR) for access is a key
 dependency and product in this workstream will require regular check points to ensure that
 developments from the SCR are factored into the product development work to ensure
 alignment.



Legend

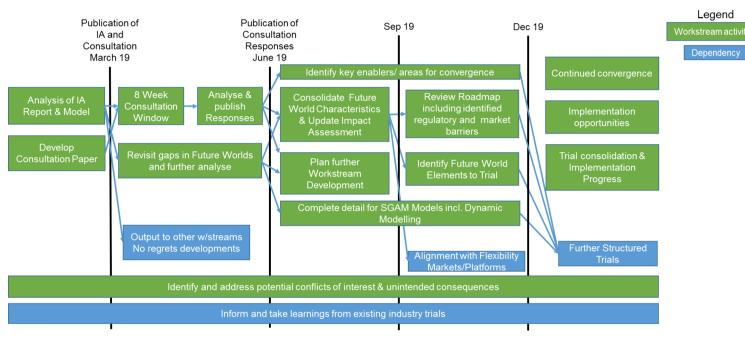
Workstream 3 - DSO Transition 8

8.1 Workstream Objectives

The aim of this workstream is to support the development of a detailed view on the pathways for the DSO transition and provide evidence base (through published deliverables outlined in PID – to be clear to stakeholders, we will not be collating and publishing a separate evidence pack) to support regulatory and policy decision making.

8.2 Workstream Products and Dependencies

The below diagram gives a high-level view on the key workstream activities, products to be developed in this workstream and the dependencies and flow of those products.



Identify no regrets developments and progress through delivery as we go through the process

8.3 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline / Resources	Consult	SG Review	AG Review
1	Impact Assessment Consultation on Baringa's Impact Assessment (IA) findings: a) Undertake analysis of Baringa's IA report and develop consultation document. b) Undertake 8 w eek consultation, starting in early March.	a) Jan 19 - Mar 19 b) Mar 19 - May 19 c) May 19 - Jun 19 d) Jun 19 - Sep 19 e) Jun 19 - Sep 19		Review as required.	Possible review before launching consultation.



	During the				
	consultation period,				
	analyse gaps in the				
	Future Worlds that				
	have been				
	highlighted through				
	the work to date on				
	the Impact				
	Assessment and				
	potential conflicts of				
	interest and				
	unintended				
	consequences				
	w orkshops.				
	c) Review and analyse				
	responses. Publish				
	responses and				
	outline key				
	messages and				
	proposed actions.				
	d) Update Impact				
	Assessment				
	e) Plan further				
	w orkstream				
	developments to take				
	forw ard actions from				
	the consultation and				
	to close the gaps that				
	have been identified				
	through work				
	package c).				
	Further description				
	rarener aescription				
	Background: This product is an o	outcome of our work on the	Future Worlds	s in 2018 where	we modelled
	and consulted on five potential in				
	energy system in the UK. Baringa				
	assessment of the Worlds to high	hlight relative differences a	nd pathways t	o the transition	to DSO.
	The aim of this product is to give	e stakeholders the opportur	nity to review F	Baringa's findings	and provide
	any further input to inform the a				
	provided to Ofgem and BEIS as				
	 to be clear to stakeholders 				
	pack) to inform policy and regul	-	•	•	
	taking forward development wor				
	and will further develop actions				
	in the Future Worlds.				
2	Consolidate Future World	Jun 19 – Sep 19	N/A	Review as	Review as
	Characteristics		- 7/ -	required.	required to
					support
	Consolidate Future World				developmen
	characteristics based on the				t.
	consultation findings and input				
	from T.E.F and other projects.				
	Further description				
	Packground: We haliave that -t-	Noboldor foodback on the - :-	ndonondont :	nact access	t saill
	Background: We believe that sta highlight characteristics of the Fi				
	maniant characteristics of the H	acare viorius chactequite U	i can be takell	TOT WATER TOT TUIL	1101



	development. With the T.E.F projects underway, these characteristics can be further developed and validated through them.						
	The aim of this product is to provide a consolidated view on the areas of the Future Worlds that require further development. These characteristics will be fed into the T.E.F projects for development through trials and will inform the scope for Product 6 to explore these areas through further modelling.						
3	Key Enablers & Decisions required Identify key enablers/ decisions required from Ofgem/BEIS (e.g. regulation) and handover as part of evidence base (through published deliverables outlined in PID – to be clear to stakeholders, we will not be collating and publishing a separate evidence pack) to Ofgem and BEIS.	Jun 19 – Dec 19	N/A	Review as required.	Review as required to support developmen t.		
	Further description Background: As part of the Future Worlds consultation, we highlighted a number of areas that we believe are key enablers for the transition to a smart flexible energy system in the UK. Taking the consultation feedback forward, the aim of this product is to build on the 2018 work to identify enablers more widely for other parties impacted by the transition and consider Home Energy Management Systems, consumer access devices and interactions linked to Internet of Things. Cyber security requirements and the scalability of any services will be key. In addition, this product will develop a view on the key decisions that need to be addressed by Ofgem and BEIS from a regulation and policy						
4	perspective to enable the transit Review DSO Transition Roadmap Based on findings from the Impact Assessment, update roadmap to provide clarity on the short, medium and long term actions required to facilitate the transition to DSO.	Sep 19 – Dec 19	N/A	Review as required.	Review as required to support developmen t.		
	Further description Background: in 2017, the ONP published a roadmap outlining the best view at the time on the progression to DSO. The aim of this product is to update this roadmap to reflect the latest view on this transition. Taking input from the independent impact assessment and other WS3 products, this product will update the key activities (including least regret activities) that networks are required to undertake in the short, medium and long term and will outline when key decisions might be required from Ofgem and/or BEIS to progress the transition.						
5	Identify Future World Elements to Trial Based on the IA findings and the consultation, outline the elements that need to be	Feb 19 – Dec 19	N/A	Review as required.	Review as required to support developmen t.		
	developed further through the T.E.F projects or otherwise.						



	This product will continue the innovation pathway mapping work that was started in 2018 under WS3 P7 to identify any further innovation gaps to inform scope for existing and any potential future trials. The aim of this product is to ensure that ONP maintains visibility of trials within the DSO transition space and can help inform the scope through ONP outputs.						
6	Further Modelling Identify Future Worlds (or Hybrids) that require further modelling to better understand the next layers of detail including system requirements. Undertake further modelling which may include dynamic modelling and completion of the lower layers of SGAM to understand system requirements. Identify governance process and methodology for updating the SGAM models based on the Future Worlds consultation	Jun 19 onwards	N/A	Review as required.	Review as required to support developmen t.		
	responses, outputs from T.E.F and other relevant industry initiatives. Further description Background: The Future Worlds were developed using Smart Grid Architecture Modelling (SGAM) methodology that allowed us to capture the various actors in the models and the communication links between them across three of the five interoperability layers (business, function and information) to help us compare and contrast the various Worlds and the roles of actors within them. Recognising the differences in system requirements and architectures across DNOs, ONP made a decision in 2018 to populate the lower interoperability layers (communication and component) at a later stage when a more detailed view on the Future Worlds and elements that are likely to progress is available. This aim of this product is to continue this work and to develop a more detailed view on system requirements through further modelling work. Based on the outcomes of the independent impact assessment and other WS3 products such as the Product 3 Future Worlds Characteristics, this product will outline the specific areas that will be modelled in detail and will identify an appropriate modelling methodology to take forward and deliver the work.						
	This work will take into account						
7	Potential Conflicts of Interest & Unintended Consequences Taking a RAID (Risks, Actions, Issues and Decisions) approach, this product will work closely with industry stakeholders to: • Understand and investigate potential conflicts of interest in system and network operation functions of the DSO and mitigating actions to ensure fairness and	a) Jan – July 19 – develop first RAID Log b) Aug-Dec 19 – maintain RAID log and execute mitigating and contingency action	Review and develop through significant stakeholde r engageme nt.	Review as required to support development .	Review as required.		



transpare	ency in
decision	making.

- Identify and investigate potential conflicts of interest for other actors in the market and mitigating actions to avoid negative outcomes.
- Identify potential unintended consequences, both positive and negative, and identify mitigating actions to ensure that the right behaviours are driven.

This product will be an ongoing activity to monitor network and industry developments on the topic and will take forward the DSO actions identified for the implementation of principles for neutral facilitation through WS1A P1 Flexibility Market Principles. This product will work closely with T.E.F projects and will build on conflicts of interest and unintended consequences identified through Baringa's Impact Assessment.

The deliverable for this product will be a RAID Log that will be published in July. This log will continue to be maintained through stakeholder engagement and will be re-published as changes are made.

Further description

Based on stakeholder feedback, we have made a decision to introduce this product to give stakeholders visibility of work that is taking place within Open Networks and by DNOs to investigate and address potential conflicts of interest in network and system operation functions of the DSO as well as better understand and address potential conflicts of interest for other industry players that might lead to gaming behaviours to the detriment of customers. In addition to this, this product will also continue work on the identification of unintended consequences and mitigating actions that are required to ensure a fair marketplace that delivers the best outcomes for the consumers.

This product aims to work closely with stakeholders to ensure fairness and transparency in decision making and to ensure right behaviours for all players in the market to ensure best outcomes for customers.



We have shown in the flow diagram above how this work has followed on from last year's development.

8.4 Workstream Assumptions

The key assumptions for Workstream 3 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the
 products in the timescales defined and consultancy support may be engaged to support the
 delivery of some products.
- We will have continuity of resources from 2018 Workstream 3.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.

Existing Statutory and Regulatory Policy

- It is recognised that existing energy systems policy is developing and, over the next few years,
 this may change in areas that impact the scope of the Open Networks project. Workstream 3
 will seek to make progress against the existing energy systems policy and framework. Where
 longer term solutions are being considered, work will not be constrained by existing policy as
 it is assumed that this may evolve.
- It is assumed that we will continue to engage with BEIS and Ofgem to address relevant statutory and regulatory policy that may be required for DSO implementation.



9 Workstream 4 – Whole Energy Systems

9.1 Introduction

Our 2017 definition of "Whole Energy System" and our work to date has been electricity network focused whilst recognising cross-vector information exchange and opportunities. Reflecting on stakeholder views, the ONP has initiated a new workstream in 2019 to consider a more integrated approach to whole energy systems that extends to other energy vectors including gas, heat, transport, waste and water.

A key question to address is whether more cost effective decisions for planning or operation could be made by electricity networks and other infrastructure providers if a whole energy systems view was taken into account (e.g. could there be more effective investment in gas infrastructure to alleviate a potentially expensive constraint in electricity infrastructure).

This workstream includes representation from a number of vectors and has undertaken a review of existing academic research and industry initiatives (e.g. Project Freedom, Integrel, Green City Vision, other NIA & NIC projects etc.) on whole energy systems in early 2019 to understand how ONP can build on this and scope any potential development to deliver tangible improvements and benefits in the short (ED2), medium (ED3) and long term (beyond ED3).

Following this review and scoping exercise, this workstream has identified potential areas of work that are being presented to the ONP Steering Group for a Go/No Go decision in April 2019.

Should the decision be to progress with further development work within this workstream, ONP will publish the findings and decision from this review process and depending on the outcomes may consult on this. The scope and delivery plan will be published to the ENA webpage for <u>project deliverables</u>.

9.2 Workstream Objectives & Customer Benefits

Whole energy system thinking will deliver benefits for customers and consumers by realising more cost-effective network investment and operation across the whole energy system.

This is an outline for development in Q1-Q2 2019. Following mobilisation of a broad cross-industry Workstream, a number of products have been scoped to deliver these benefits and have been presented to the Steering Group for a Go/No Go decision. Once approved, the scope for these products will be published on the ENA webpage for project deliverables.

9.3 Workstream Products, Dependencies & Schedule

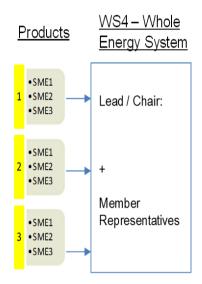
R e f	Product	Timeline / Resources	Consult	SG Revi ew	AG Revie W
1	Define ToR, objectives and scope for delivery in 2019. Review of existing industry initiatives and any outcomes delivered Align with ENA gas initiatives Link to RIIO2	Jan 19 – Apr 19	N/A	Apr 19	Mar 19



9.4 Workstream Resource Requirements

We have mobilised a Workstream group to develop the first product above to scope the work. In addition to electricity and gas network companies, we have opened this to non-network companies so that we can take their views into account. Membership of this workstream can be found here.

The workstream has defined scope and deliverables with product development teams of Subject Matter Experts (SMEs) in place that will develop products in between the workstream meetings should the Steering Group make a decision to progress this work. This is the way that the Open Networks project has worked to date and is represented below:



- The Work Stream Group will steer the development of the products
- The Work Stream Member Chairs should sit on the steering group
- Member representatives can also be SME's for particular products

We expect that sufficient resources will continue to be deployed by each of the ENA member organisations to deliver the products in the timescales defined. Named resources will be identified by each of the ENA member organisations and these will be allocated to the Workstream meeting to begin with and then subsequently in product working groups. Additional resources from the ENA member organisations, including Gas members, may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.

9.5 Workstream Governance

Non-ENA Workstream Members are expected to take the outputs from the workstream into their own internal governance structures for review and input to ensure all relevant feedback/input is delivered back to the Workstream.

We expect that the outputs from the Workstream will be sent to the Open Networks Steering Group and the Gas Futures Group for approval.

9.6 Workstream Assumptions

The key assumptions for Workstream 4 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations and external parties to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated to the Workstream meeting to begin with and then subsequently in product working groups.

Open Networks Project Phase 2 2018 Project Initiation Document v2



 Additional resources from the ENA member organisations, including Gas members, may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.



10 Workstream 5 – Communications and Stakeholder Management

10.1 Workstream Objectives

To use a combination of public affairs, press, social media and direct engagement to raise stakeholder awareness of:

- The DSO transition and its importance through Open Networks Project
- The opportunities for stakeholders to engage with the Project
- The role network operators are playing in laying the foundations for the UK's smart electricity grid.

This workstream will continue to:

- Proactively support stakeholder engagement for key Open Networks Output
- Provide comms input and review into key publications (e.g. consultations, EoY report)
- Engage with parliamentarians & policy makers
- Generate media and stakeholder interest
- Press Releases
- Social Media
- Interviews
- · Research material to support key messaging
- Event speaking opportunities
- Exhibitions

10.2 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline/	Target audience
		frequency	
1	ENA organised breakfast briefing events, to be held at ENA 's offices	Quarterly – up to 2 a year	Energy sector, think- tanks, policymakers, trade & national media
2	ENA sponsored Westminster panel events or private dinners, to be held at external venues and in partnership with appropriate external organisations	Quarterly – up to 2 a year	Energy sector, think- tanks, policymakers, Government, MPs & researchers, trade & national media
3	Webinars to provide opportunities for the wider stakeholder community to feed into appropriate Open Networks consultations and products.	In line with Workstream consultations and product timelines	Energy sector, policymakers
4	Content for PR/PA work (e.g. think-tank research, polling) to help create media stories on Open Networks related issues	3 per year	Energy industry, think- tanks, policymakers, Government, MPs & researchers, trade & national media



5	Online media-buying (advertising) to promote Open Netw orks events, w ebinars & consultations on key w ebsites (e.g. trade press)	Co-ordinated around key announcements	Energy industry, think- tanks, policymakers, Government, MPs & researchers, trade & national media
7	'Drop-in' stand/exhibition at industry events (e.g. LCNI, Pow er Responsive, DNO events)	Up to 4 a year	Energy industry, think- tanks, policymakers
8	Social media collateral (animations, infographics) to promote Open Networks	Quarterly – up to 4 7 day campaigns a year. Material repurpose and reused in addition to that	Energy industry, think- tanks, policymakers, Government, MPs & researchers, trade & national media
9	Communications and engagement strategy development	Annual	ENA, ENA members, ON Steering Group

10.3 Workstream Assumptions

<u>Planning</u>

Planning will be based around Project milestones once they have been agreed by the Steering Group. This will determine the exact time, nature and frequency of the deployment of resources. Those resources included here would lead to a significant increase in activity under Workstream 4, compared to 2018.

ENA members

ENA will work with individual member companies to use their own communications activity to promote Open Networks as set out.

ENA Press & Public Affairs Strategy

Open Networks is one of three Strategic Projects as part of ENA's Press & Public Affairs Strategy, as agreed by ENA's Public Affairs Committee. It therefore forms a key part of ENA's wider communications activity.

Oversight

Workstream 5 will continue to be overseen by a sub-committee of ENA's Public Affairs Committee. The Chair of Workstream 5 and ENA's Head of Press & Public Affairs will continue to report on the progress of Workstream 5 to the Open Networks steering group on a monthly basis.



11 Monitoring Implementation

The ONP will monitor the rollout and implementation of practices based on 2018 products across network companies to have visibility of the progress being made and understand any barriers to deployment of consistent approaches across networks.

The monitoring will be undertaken as an internal project activity on a bi-annual basis with input from the network company representatives on the relevant workstreams. Following a review of progress and issues, an external facing high level progress update will be published.

The following products will be monitored for deployment:

- 2018 WS2 P1 (Good Practice ahead of Connection Applications)
- 2018 WS2 P4 (Information on Flexibility Services)
- 2018 WS2 P5 (Good Practice Following Connection Applications)
- 2018 WS2 P6 (Guidance on Post Connection Changes)
- 2018 WS2 P7 (Provision of Constraint Information)
- 2017 (Information on Distribution Connections Options)
- 2018 WS1 P7 (ANM Information) Monitor roll-out of methodology to assess curtailment and evaluate ANM system reliability.
- 2018 WS1 P2 (DER Services) Monitor roll-out of active power services and others that are defined in 2019 across all DNOs and associated procurement processes. To include progress update, highlighting any issues and lessons learned

In addition to providing visibility of implementation, this exercise will highlight the key recommendations from the work done to date in a single location that DNOs may wish to include in their ICE plans to further demonstrate progress and improvements to customers.



12 Appendix A – Mapping of 2018 Products to 2019

2018		2019		
Product Ref	Product Name	Product Ref	Product Name	Relationship
WS1 P1	Investment Processes	WS1BP1	Investment Planning	Continued development
WS1 P2	DER Services Procurement	WS1A All products	All products under Flexibility Services workstream	Continued development
WS1 P3	Industry Framework Interactions	N/A	N/A	Managed through dependency group for Codes in 2019 and will be fed into relevant products.
WS1 P4	Reliability Standards & Emergency Requirements	WS1BP3	Real Time Data Exchange & Forecasting	Issue of priority of actions is continued under WS1BP3 in 2019.
WS1 P5	Whole System FES	WS1BP2	Whole System FES	Continued development
WS1 P6	Regional Service Requirements	WS1A P2	DSO Services – Procurement Processes	Output from this will be taken forward in the Flexibility Services workstream in 2019.
WS1 P7	ANM Information	N/A	N/A	The implementation of good practice will be monitored in 2019 as outlined in Section 11 of PID.
WS1 P8	System Wide Resource Register	WS2 P1	System Wide Resource Register.	Continued development
WS1 P9	TSO-DSO Transmission Impacts	N/A	N/A	Managed through dependency group for codes in 2019 and will be fed into relevant products.
WS1 P10	Facilitating Connections – Existing Processes for Flexible Resources	N/A	N/A	Complete as it was superseded by other products in 2018 (WS1 P11)
WS1 P11	Facilitating Connections – Action Plan and Report	WS2 P2 & P3	Queue Management Interactivity	Continued development
WS1 P12	TSO/DSO & DER Data Requirements	WS1BP4	Data Exchange in Planning Timescales	Roll-over of 2018 activities and continued development.
WS1 P13	Operational Data & Control Architectures	WS1BP3	and Forecasting	Roll-over of 2018 activities and continued development.
WS2 P1	Good Practice ahead of Connection Applications	N/A	N/A	Monitor implementation as outlined in Section 11 of PID.



WS2 P2	Management of Capacity	N/A	N/A	Monitor
	Transgement or capacity	1,471		implementation as outlined in Section 11
				of PID.
WS2 P3	Explanation of 'Terms' &	N/A	N/A	Continue to maintain
	'Definitions'			and update as
				required.
WS2 P4	Information on Flexibility Services	N/A	N/A	Monitor
				implementation as
				outlined in Section 11 of PID.
WS2 P5	Good Practice Following	N/A	N/A	Monitor
W32F3	Connection Applications	IN/A	IVA	implementation as
	Connection/Applications			outlined in Section 11
				of PID.
WS2 P6	Guidance on Post Connection	N/A	N/A	Monitor
	Changes			implementation as
				outlined in Section 11
14/62 57		N1/A		of PID.
WS2 P7	Provision of Constraint	N/A	N/A	Monitor
	Information			implementation as
				outlined in Section 11 of PID.
WS3 P1 &	SGAM Modelling	N/A	N/A	Complete as it was
P2				superseded by other
W62 B2		N1/A	N/4	products in 2018.
WS3 P3	Market Agnostic DSO Elements	N/A	N/A	Continued monitoring through WS3.
WS3 P4	Independent Impact Assessment of Models	WS3 P1	Impact Assessment	Continued development.
WS3 P5	DSO Model Validation & Review Including Public Consultation	N/A	N/A	Complete as it was
				superseded by other
				products in 2018.
WS3 P6	Key Enablers for DSO	WS3 P3	Key Enablers & Decisions	Continued
W62 D7	Forther Trials to Address Court	WC2 DE	Required	development.
WS3 P7	Further Trials to Address Gaps in DSO Functionality	WS3 P5	Identify Future World Elements to Trial	Managed through this product and
			Lieniens to mai	dependency group for
				Trials in 2019 and will
				be fed into relevant
				products.
WS3 P8	Preferred DSO Models &	WS3 P4	Review DSO Transition	Roll-over of 2018
	Proposed Implementation Plan		Roadmap	activities and
				continued
				development based on
				responses to the
				Impact Assessment consultation.
			1	CONSUITATION.



13 Appendix B – Key interactions between ONP Products and T.E.F

T.E.F. Touchpoints

